

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ADAM S. WYSZYNSKI

Appeal No. 2001-1790
Application No. 08/579,072

HEARD: September 9, 2003

Before KRASS, MARTIN and JERRY SMITH, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-21.

The invention is directed to a monolithic video signal processing circuit for achieving optimum signal-to-noise ratio by having a band-pass filter always receive a constant maximum possible input signal, reducing distortion and resulting in dissipated power savings.

Representative independent claim 1 is reproduced as follows:

1. A monolithic video signal processing circuit comprising within a single substrate:

means for accepting a video signal;

means for detecting the amplitude of accepted signals and for amplifying said accepted signals to a specific level; and

means for accepting said specific level amplified video signals and for processing said amplified signals to reduce all but the intermediate frequencies (IF) present in said video signals while amplifying said IF frequencies to a certain fixed value for presentation to an output of said circuit.

The examiner relies on the following references:

Yamamoto	5,361,395	Nov. 01, 1994
Umezawa et al. (Umezawa)	5,491,507	Feb. 13, 1996 (filed Oct. 22, 1993)
Kaschke	5,555,550	Sep. 10, 1996 (filed Aug. 29, 1994)

Claims 1-21 stand rejected under 35 U.S.C. §103. As evidence of obviousness, the examiner cites Yamamoto and Umezawa with regard to claims 1-12 and Yamamoto and Kaschke with regard to claims 13-21.

Reference is made to the briefs and answer for the respective positions of appellant and the examiner.

OPINION

Turning, first, to independent claim 1, the examiner points out that Yamamoto discloses a means for accepting a signal (14), a means (16) for detecting the amplitude of accepted signals and for amplifying the accepted signals to a specific level and a means (17) for accepting specific level amplified signals and for processing the amplified signals to reduce all but the IF present in the signals while amplifying the IF to a certain fixed value for presentation to an output of the circuit. Specifically, the examiner points to column 4, lines 1-20, of Yamamoto for this disclosure.

The examiner recognizes that Yamamoto does not explicitly show the acceptance of a "video" signal but contends that the processing of such signals is well known as indicated by Umezawa, where a user is described as receiving either a voice signal or a video signal. Thus, the examiner concludes that it would have been obvious to include a video signal as the accepted signal in Yamamoto.

Appellant's position is that while Yamamoto discloses an AGC circuit for receiving audio signals on a mobile telephone and Umezawa discloses a mechanical construction of a video telephone, neither reference teaches or suggests a means for processing "video" signals as required by claim 1. Appellant particularly points out that Umezawa has no discussion of the components of a circuit for signal processing and

only shows a block 17 in Figures 3 and 4, as a “main circuit board” so that, in appellant’s view, Umezawa is non-enabling. At best, then, in appellant’s view, the skilled artisan viewing Yamamoto and Umezawa “would only find a ‘signal processing means for permitting . . . a vocal communication’” (principal brief-page 7) and no suggestion of a “video” signal processing circuit.

Appellant’s argument is summarized at page 2 of the reply brief, wherein appellant states that “[t]he mere mention of a capability to provide ‘a vocal communication or a visual communication’ is not sufficient to teach one skilled in the art how to modify the Yamamoto reference in order to process video signals.”

We will sustain the rejection of claim 1 under 35 U.S.C. §103 as we find ourselves in agreement with the examiner’s position.

Appellant does not dispute that Yamamoto teaches the claimed subject matter but for the accepted signal being a “video” signal. Since Umezawa discloses a video telephone with a signal processor for processing at least a voice and a “visual” communication (column 2, line 65-column 3, line 1, of Umezawa), Umezawa provides a teaching, or at least a suggestion, to artisans that the video signals in a telephone system may also be subjected to signal processing. Umezawa suggests at least that much even though it may not teach the specifics of the processing performed by Umezawa.

Yamamoto is most likely concerned with audio signals because the preferred embodiment is directed to a mobile telephone and Yamamoto is concerned with improving the quality of "speech" communication (column 1, line 20, of Yamamoto). However, given that Yamamoto does not limit the accepted signals to merely audio, or speech, signals, given that some telephones have both audio and video capabilities (e.g., Umezawa), and given that Umezawa clearly refers to the signal processing of "visual" communication, it is our view that the skilled artisan would have found it obvious to employ Yamamoto's signal processing techniques to "video," as well as "audio," signals. Appellant has provided us with no reason why the skilled artisan would not have, or could not have, applied a video signal to antenna 11 at the input to Yamamoto's circuit in Figure 1. No reason is apparent to us as to why the artisan would have been dissuaded from applying a video signal thereto. Arguments which appellant could have made but chose not to make in the brief have not been considered and are deemed to be waived [see 37 CFR 1.192 (a)]. The only substantive argument that appellant did make, concerning Umezawa's failure to provide specifics as to his video signal processing, is not persuasive to us as to the nonobviousness of the instant claimed subject matter.

While appellant's representative offered interesting arguments during a telephonic hearing on September 9, 2003, regarding Yamamoto's inability to process

video signals (which, if true, would offer substantial evidence tending towards the unobviousness of applying a video signal to the circuit of Yamamoto), we note that such argument does not appear in the briefs. Accordingly, we have not considered this argument since the examiner has not had an opportunity to respond to it.

Claims 2-5 fall with claim 1 in accordance with appellant's grouping of the claims, at pages 6 and 8 of the principal brief. Accordingly, we also will sustain the rejection of these claims under 35 U.S.C. §103.

Turning now to the rejection of claim 6, this claim adds the limitation that the specific level for the amplification "is the maximum level acceptable as an input to said processing means to avoid distortion of said video signal."

The examiner cites column 4, lines 1-20, of Yamamoto as teaching this claim limitation. Appellant argues that this portion of Yamamoto merely discloses that the cited amplifier is a "level control means" (column 4, lines 13-14) and that there is no teaching therein that amplifier 16 is used to amplify the signal to a "maximum level acceptable" to filter 17 to "avoid distortion." Instead, argues appellant, amplifier 16 is part of a typical AGC circuit and is controlled by level detector 1 and error amplifier 4 to maintain a level signal at the output of filter 17, and not at the input of filter 17, as required by claim 6.

The examiner's response is that the cited portion of Yamamoto "clearly teaches that the amplification is the maximum level acceptable as an input of filter 17 (col. 4, lines 13-19), the filter is to avoid distortion of the signal (i.e., removing the unwanted frequencies, col. 4, lines 16-18)" (answer-page 10).

We have reviewed the cited portion of Yamamoto and find nothing therein that indicates that the level of amplification "is the maximum level acceptable as an input to said processing means," as claimed. While certain unwanted frequencies may be removed by Yamamoto, and a distortion of the input signal might even be avoided or ameliorated by Yamamoto, we find no teaching therein that Yamamoto achieves the result in the same way as appellant, i.e., by using a "maximum level acceptable as an input to said processing means." Moreover, Yamamoto's removal of certain unwanted frequencies does not suggest that the "specific level for said amplification is the maximum level acceptable as an input to said processing means...."

Accordingly, we will not sustain the rejection of claim 6 under 35 U.S.C. §103.

Turning to independent claim 7, the examiner presents the same argument and reasoning as was applied to independent claim 1. Appellant presents essentially the same argument as offered for claim 1 but adds the comment that neither of the applied references teaches or suggests processing a video signal on a "monolithic circuit," as

claimed. Although claim 1 includes the "monolithic" limitation, appellant did not make this argument with regard to claim 1.

In any event, we do not find the argument convincing because, as indicated by Umezawa (column 5, lines 56-57: "a main circuit board 17 which includes a processor and a memory..."), it was known to process video signals on a single, or "monolithic," circuit and the artisan would have found nothing unobvious about placing the processing being performed on a monolithic circuit.

Accordingly, we will sustain the rejection of claim 7, and of claims 8-11 which stand or fall therewith, under 35 U.S.C. §103.

With regard to claim 12, we will not sustain the rejection of that claim under 35 U.S.C. §103 because, like claim 6 supra, the examiner has not shown that the claimed "specific level for said amplification is the maximum level acceptable as an input to said further processing step to avoid distortion of said video signal" was suggested by the applied references

Turning to independent claim 13, the examiner rejects this claim under 35 U.S.C. §103 over Yamamoto in view of Kaschke, contending that Yamamoto discloses the claimed subject matter but for showing the mixer, filters and amplifiers being "constructed on a single integrated substrate." Turning to Kaschke for a showing of the

electrical components of a radio telephone being constructed on a single integrated substrate (column 3, lines 28-35), the examiner concludes that it would have been obvious "to have the components on a single integrated substrate in order to reduce size, weight, or components" (answer-page 7).

It is appellant's position that Kaschke does not disclose a "monolithic circuit" because the printed circuit substrate of Kaschke is not a monolithic circuit, as required by the claim and the dictionary definition cited by the examiner, that definition, as reported by appellant at page 9 of the principal brief, being "a circuit built on a single crystal of silicon." At page 12 of the principal brief, appellant argues, further, that Kaschke provides no discussion of RF or IF signal processing components, as required by claim 13 but, rather, discloses LEDs for a telephone display. Moreover, indicates appellant, the LEDs of Kaschke are surface mounted components, mounted on a printed circuit substrate and, as such, are not components "constructed on an integrated circuit substrate" as required by claim 13.

Kaschke is employed by the examiner as showing that it was well known to construct components on a single substrate. That Kaschke does not show RF or IF signal processing components is not fatal to the rejection because the examiner relies on the primary reference to Yamamoto for such a teaching.

While appellant argues that the printed circuit in Kaschke is not "monolithic" and does not meet the definition of "monolithic" as presented by the examiner, appellant never explains why he believes this to be so. It appears to us that "monolithic," in its everyday sense, is merely something that is single and large. Since "large" is a relative term, it can be reasonably said that the printed circuit of Kaschke is "large." As for being "single," it is clear that the printed circuit substrate of Kaschke is a "single" substrate. Accordingly, it appears to us that Kaschke teaches a "monolithic" circuit, as broadly construed, especially in view of appellant's failure to offer anything which would contradict such a finding. Appellant does not explain his statement, at page 2 of the reply brief, that "[a] printed circuit board is not a single integrated circuit substrate." It would appear that an integrated circuit on a printed circuit board would constitute a single integrated circuit substrate. Accordingly, this argument is not persuasive of nonobviousness.

We would also note our agreement with the examiner that while appellant argues that the applied references do not suggest constructing components on an "integrated circuit substrate," the exact claim language calls for "a single integrated substrate." The printed circuit board of Kaschke would appear to be "a single integrated substrate" and appellant offers nothing to convince us otherwise.

Appellant's argument regarding Kaschke's LEDs being surface mounted has no bearing on the issue of whether Kaschke discloses a single integrated substrate since it is the teaching of placing components on such a single integrated substrate which would have led the artisan to place the RF and IF signal processing components of Yamamoto on such a single integrated substrate.

Since we do not find appellant's arguments regarding claim 13 to be persuasive, we will sustain the rejection of claim 13, as well as the rejection of claims 15-17 which stand or fall with claim 13, under 35 U.S.C. §103.

Claim 14 limits the "first filter" of claim 13 to a "low-pass filter." Appellant argues that the band-pass filter (the "first" filter) of Yamamoto is not a low-pass filter. The examiner contends that using a low-pass filter instead of a band-pass filter "is a design preference as it is well established that the low-pass filter generally possess [sic] all of the same characteristics of band-pass filter [sic]" (answer-page 7).

By the definitions offered by appellant, at page 13 of the principal brief, a band-pass filter has a single transmission band, neither of the cut-off frequencies being zero or infinite, while a low-pass filter has a single transmission band extending from zero to some cutoff frequency, not infinite.

While appellant argues the intricacies of exact definitions, appellant has offered nothing to show why the use of a low-pass filter would not have been obvious over

Yamamoto's band-pass filter. Appellant has shown no criticality in the use of a low-pass filter over a band-pass filter and offers no evidence of superior results obtained by the use of the low-pass filter. Instead, appellant argues only that these two types of filters are not the same. We agree that they are not the same but appellant offers nothing to convince us that the substitution of one for the other in Yamamoto would not have been obvious, within the meaning of 35 U.S.C. §103.

Even so, we will not sustain the rejection of claim 14 because, in our view, the examiner, having the initial burden, did not establish a prima facie case of obviousness with regard to the claimed subject matter. While the examiner offers "design preference" (answer-page 7) as the reason for substituting a low-pass filter for Yamamoto's band-pass filter, this does not explain why the artisan would have sought such a substitution when Yamamoto clearly shows a band-pass filter for removing signal components having frequencies other than a predetermined frequency "band" and the examiner has not shown that a low-pass filter in Yamamoto would reach the same result. In fact, it would seem that Yamamoto's device would not function as intended if a low-pass filter is used because this would not yield the removal of signal components having frequencies other than a predetermined frequency "band," as disclosed by Yamamoto.

Accordingly, even though appellant's argument in this regard is weak, as it merely points out the difference between a low-pass and a band-pass filter without explaining why, in this situation, it would not have been obvious to use a low-pass filter in place of the band-pass filter, within certain frequency ranges, it does not appear to us that the examiner has carried the requisite initial burden and, as such, we will not sustain the rejection of claim 14 under 35 U.S.C. §103.

The positions of appellant and the examiner with regard to independent claim 18 are the same as with regard to claim 13, supra. Accordingly, for the same reasons, we will sustain the rejection of claim 18, and of claims 20 and 21 which fall therewith, under 35 U.S.C. §103.

Finally, with regard to claim 19, we will not sustain the rejection of this claim because it contains the limitation of "the limit of said VGA being the maximum level acceptable by said third signal filtering step without distortion." For the reasons supra, with regard to claims 6 and 12, we do not find such a limitation taught or suggested by the applied references. We will not sustain the rejection of claim 19 even though appellant does not argue this limitation with regard to claim 19 because not to do so would result in an inconsistency with regard to our decision as to the rejections of claims 6 and 12.

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